REMARKS

This Amendment is submitted in reply to the final Office Action mailed on July 14, 2006. No fee is due in connection with this Amendment. The Director is authorized to charge any fees which may be required, or to credit any overpayment to Deposit Account No. 02-1818. If such a withdrawal is made, please indicate the Attorney Docket No. 112701-530 on the account statement.

Claims 1-19 are pending in this application. In the Office Action, Claims 1-3, 5-7, 9-10 and 12-19 are rejected under 35 U.S.C. §103. In response Claims 1 and 7 have been amended. This amendment does not add new matter. In view of the amendment and/or for the reasons set forth below, Applicants respectfully submit that the rejections should be withdrawn.

Applicants have amended Claims 1 and 7 for clarification purposes. The amendments are supported in the specification, for example, at page 2, line 20 to page 3, line 5.

In the Office Action, Claims 1-3, 5-7, 9 and 12-19 are rejected under 35 U.S.C. §103(a) as being unpatentable over U.S. Patent No. 6,177,580 to Timmermann et al. ("*Timmermann*") in view of EP 0726321 to Barclay ("*Barclay*"). Applicants believe this rejection is improper and respectfully traverse it for at least the reasons set forth below.

Independent Claims 1 and 7 recite, in part, a carrier oil and one or more long-chain polyunsaturated fatty acids from a biomass obtained from the culture of a microorganism. In contrast, Applicants respectfully submit that there is no suggestion or motivation to combine the cited references to obtain the present claims, and even if combinable, all of the claimed elements are not taught or suggested by the cited references.

Applicants respectfully disagree with the Patent Office's reason for a motivation to combine the cited references and respectfully submit that it is based on a misunderstanding of the cited references and the present claims. For example, the Patent Office's sole basis for the motivation to combine the cited references (i.e. the product and method of *Timmermann* to microorganisms as taught by *Barclay*) is that *Barclay* allegedly teaches that certain oils deemed useful by *Timmermann*, such as fish oils, have a lower concentration of beneficial oil than do microorganism. See, Office Action dated, February 2, 2006, page 4, lines 15-20. In reaching its conclusion, the Patent Office has failed to consider the specific teachings of each reference and their objectives as understood by the skilled artisan.

Barclay and *Timmermann* are directed to different arts with the only link between them being the fact that both disclose dietary lipids. However, the cited references teach completely different processes for making their final product. *Timmermann* teaches a non-biological process of making synthetic triacyglycerols rich in conjugated linoleic acid (CLA) residues. See, *Timmermann*, column 2, lines 19-41. CLA is not an LC-PUFA. As admitted by the Patent Office (see, Office Action dated February 2, 2006, page 4, lines 7-8), there is no reference to LC-PUFA in *Timmermann*. In fact, there is no reference to any biomass or microorganisms in *Timmermann* as admitted by the Patent Office. *Barclay* teaches a process for obtaining arachidonic acid from biomass produced by culturing a specific micro-organism. See, *Barclay*, page 3, lines 9-12. One having ordinary skill in the art would understand that the synthetic chemical route taught by *Timmermann* cannot be applied to the biological process of *Barclay* or vice versa. For at least these reasons, Applicants submit that the person skilled in the art would not be motivated to combine the teachings of *Barclay* and *Timmermann*.

Moreover, the Patent Office has not even attempted to show how *Barclay* and *Timmermann* could be combined to arrive at the present invention. For example, *Timmermann* teaches a required process step of heating the reaction mixture to a temperature of 180-240 °C. See, *Timmermann*, column 4, lines 5-14. Applicants respectfully submit that such a heating application would render any microorganisms from *Barclay* innocuous and unable to perform its intended function as taught by *Barclay*. The Patent Office provides no support as to how this could be done. Consequently, *Timmermann* actually teaches away from using any microorganisms. Accordingly, one having ordinary skill in the art would have no reasonable expectation of success in combining *Timmermann* and *Barclay* to arrive at the present claims.

The Patent Office asserts that because Applicants have alleged that the secondary reference would be inoperable, that the relevant test of nonobviousness is whether the primary reference would be rendered inoperable. Nevertheless, Applicants respectfully submit that the Patent Office's assertions about the inability to physically combine the cited references misconstrues Applicants' main arguments. For example, the Patent Office has failed to consider the cited references as a whole including those portions teaching against or away from each other and/or the claimed invention. *Bausch & Lomb, Inc. v. Barnes-Hind/Hydrocurve Inc.*, 796 F.2d 443 (Fed. Cir. 1986). "A prior art reference may be considered to teach away when a person of

ordinary skill, upon reading the reference would be discouraged from following the path set out in the reference, or would be led in a direction divergent from the path that was taken by the Applicant." *Monarch Knitting Machinery Corp. v. Fukuhara Industrial Trading Co., Ltd.*, 139 F.3d 1009 (Fed. Cir. 1998), quoting, *In re Gurley*, 27 F.3d 551 (Fed. Cir. 1994). As a result, it does not matter if the teaching away portion comes from the primary or the secondary reference or the secondary reference is shown to be inoperable because either of these would discourage the skilled artisan from making the combination in the first place.

Applicants also respectfully submit that, even if combinable, the cited references do not disclose or suggest all of the claimed elements. For example, the cited references fail to disclose or suggest the long-chain polyunsaturated fatty acids are incorporated such that at least 60% by weight of the long-chain polyunsaturated fatty acids present in the biomass are present in the carrier oil but that less than 10% of phosphorus that is present in the biomass is present in the carrier oil as required, in part, by Claim 1. Further, the cited references fail to disclose or suggest transferring the long-chain polyunsaturated fatty acid(s) in the form of triacylglycerols to the carrier oil as required, in part, by Claim 7. Moreover, the Patent Office has failed to provide support for every element of Claims 1 and 7 from the cited references.

As admitted by the Patent Office, *Timmermann* fails to disclose or suggest any LC-PUFA. In fact, there is no reference to any biomass or microorganisms in *Timmermann* as admitted by the Patent Office. Further, Applicants respectfully submit that *Barclay* achieves its objective by using conventional methods of extraction (methods known in the art), such as extraction with solvents or supercritical fluid extraction, because the use of edible oils to extract another oil from a biomass was not at that time a standard method known in the art. In view of this, the statement in *Barclay* on page 6 line 27 pointed out by the Patent Office refers to recovering the lipids by conventional extraction methods and converting them subsequently into the form of edible oil in another step.

According to an embodiment of the present invention, the carrier oil is directly used to selectively displace the biomass oil (not unwanted impurities) from the milled biomass. This enables the separation of the oil from the biomass residue, for example, by squeezing the resulting biomass-oil slurry in a press. In consequence, although the pressed cake still retains some oil, it has a very low content of LC-PUFA. The stable oil obtained by the claimed process

is clean and does not need to be subjected to further purification. In addition, the LC-PUFA is protected from oxidation by antioxidants present in the carrier oil.

For at least the reasons discussed above, the combination of *Timmermann* and *Barclay* is improper. Moreover, even if combinable, the cited references do not teach, suggest, or even disclose all of the elements of independent Claims 1 and 7 and Claims 2-3, 5-6, 9 and 12-19 that depend from these claims, and thus, fail to render the claimed subject matter obvious.

Accordingly, Applicants respectfully request that the obviousness rejection with respect to Claims 1-3, 5-7, 9 and 12-19 be reconsidered and the rejection be withdrawn.

Claims 9-10 are rejected under 35 U.S.C. §103(a) as being unpatentable over *Timmermann* in view of *Barclay* and U.S. Patent No. 5,773,075 to Todd ("*Todd*"). Applicants respectfully submit that the patentability of Claim 7 as previously discussed renders moot the obviousness rejection of Claims 9-10 that depend from Claim 7. In this regard, the cited art fails to teach or suggest the elements of Claims 9-10 in combination with the novel elements of Claim 7.

Applicants note for the record that Claims 4, 8 and 11 have not been rejected. Thus, Applicants request that the record reflect that these claims be allowed as presently pending.

For the foregoing reasons, Applicants respectfully request reconsideration of the above-identified patent application and earnestly solicit an early allowance of same.

Respectfully submitted,

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